



BRAINWARE UNIVERSITY

Term End Examination 2023-2024

Programme – B.Sc.(PA)-2022/B.Sc.(PA)-2023

Course Name – Hematology & Clinical Biochemistry

Course Code - BPAC203

(Semester II)

Full Marks : 60

Time : 2:30 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)

1 x 15=15

1. Choose the correct alternative from the following :
 - (i) Identify the Essential fatty acid-
 - a) Linoleic acid
 - b) Linolenic acid
 - c) Arachidonic acid
 - d) All these
 - (ii) Indicate the correct option. A nucleoside consists of
 - a) Nitrogenous base
 - b) Purine or pyrimidine base + sugar
 - c) Purine + phosphorous
 - d) pyrimidine base + phosphorous
 - (iii) Report the correct triose sugar out of the followings -
 - a) Glycerose
 - b) Ribose
 - c) Erythrose
 - d) Fructose
 - (iv) Identify the correct statement regarding Holoenzyme -
 - a) Functional unit
 - b) Apo enzyme
 - c) Coenzyme
 - d) All of these
 - (v) Identify the correct example of lyases -
 - a) Glutamine synthetase
 - b) Fumarase
 - c) Cholinesterase
 - d) Amylase
 - (vi) Indicate the correct option .Activation or inactivation of certain key regulatory enzymes is accomplished by covalent modification of the amino acid:
 - a) Tyrosine
 - b) phenylalanine
 - c) lysine
 - d) serine
 - (vii) Identify the correct option .The enzyme which can add water to a carbon-carbon double bond or remove water to create a double bond without breaking the bond is
 - a) Hydratase
 - b) hydrolase

- c) hydroxylase
 (viii) Identify the correct statement regarding vitamins -
 a) accessory food factors
 c) produced in endocrine gland
 (ix) Indicate the correct manifestation of vitamin A deficiency -
 a) painful joints
 c) loss of hair
 (x) Report the correct option .A poor source of Vitamin D is-
 a) Egg
 c) milk
 (xi) Report the correct option Deficiency of vitamin D causes-
 a) Ricket and osteomalacia
 c) Hypthyroidism
 (xii) Indicate the substance that can produce a specific immune response, that can react specifically with Antibody is known as:
 a) Antigen
 c) immunoglobulin
 (xiii) Indicate the correct principle of ABO blood grouping :
 a) precipitation
 c) opsonisation
 (xiv) Indicate the correct option :Maximum volume of blood collected from a blood donor should not exceed-
 a) 10.5 ml/kg body wt
 c) 12 ml/kg body wt.
 (xv) Identify the correct preservative added to urine before biochemical testing :
 a) Thymol
 c) citrate buffer
- d) esterase
 b) generally synthesised in body
 d) proteins in nature
 b) night blindness
 d) thickening of long bones
 b) butter
 d) liver
 b) Tuberculosis of bone
 d) skin cancer
 b) hapten
 d) protein
 b) agglutination
 d) nutralisation
 b) 11 ml/kg , body wt
 d) 12.5 ml/kg body wt
 b) HCl
 d) NaOH

Group-B

(Short Answer Type Questions)

3 x 5=15

Answer all questions

2. Name the non vitamin coenzymes (3)
 3. Define antioxidants (3)
 4. Demonstrate what is forward and reverse grouping. (3)
 5. Classify vitamins (3)
 6. Inspect the idea about autologous blood, (3)

OR

- Investigate the source of error in antiglobulin test (3)

Group-C

(Long Answer Type Questions)

5 x 6=30

Answer all questions

7. Describe the haemoglobinometry (5)
 8. Write down the uses of colorimeter in laboratory (5)
 9. Write the transfusion hazards due to mismatching of blood (5)
 10. Describe the Koshland's induced fit theory with diagram (5)

11. With suitable examples define peptide

(5)

12. Explain the dietary source and deficiency symptoms of Vit-k.

(5)

OR

Explain the inter relation between Vit- B12 and folic acid

(5)
